

## **2. Remarks/Discussion of Issues:**

### **Claim Summary**

By this Amendment, claims 11-15 and 17 have been amended to more clearly recite the claimed subject matter and to enhance the clarity of the claim language, while not substantially affecting or narrowing the scope of these claims. Applicants submit that the amendments made to the pending claims do not raise any new issues requiring further search or consideration, and do not add any new matter.

Claims 1-18 remain pending in the application. Applicants respectfully submit that all pending claims are in condition for allowance.

### **Rejections under 35 U.S.C. § 103**

As stated in MPEP § 2143, in order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

In assessing obviousness, and citing *United States v. Adams*, 383 U.S. 39, 40, 86 S. Ct. 708, 15 L. Ed. 2d 572, 174 Ct. Cl. 1293 (1966), the Court in *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727; 82 U.S.P.Q.2D 1385 (2007) held that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. It is well established that: "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant ... [or] if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994).

Applicants' silence on certain aspects of the rejection is by no means a concession

as to their propriety. Rather, because the applied art teaches away from combining elements and fails to disclose at least one feature of the claims, for at least the reasons discussed below, Applicants respectfully submit that the rejections are improper and should be withdrawn.

#### **Claims 1 and 4**

The Office Action, dated December 27, 2007, rejects claims 1 and 4 under 35 U.S.C. § 103(a) as being unpatentable over GORINGE et al. (U.S. Patent Application Publication No. 2003/0043820). Applicants respectfully traverse the rejection for at least the reasons set forth below.

##### Claim 1

Independent claim 1 recites, in part:

*“...a probe logically connected to the router in each area and configured to receive link state routing protocol data and from the router in each area when the router in each area floods the link state routing protocol data throughout the autonomous system.”*

GORINGE et al. does not teach or suggest at least these features. In particular, GORINGE et al. does not disclose a system that floods the network with link state routing protocol data. Rather, the system of GORINGE et al. identifies and queries only “certain routers, such as area border routers, which contain the information necessary to permit a routing or network topology to be generated.” *See* paragraph [0010]; *see also* paragraphs [0023], [0029] and [0033].

Further, GORINGE et al. specifically teaches away from this feature, stating that flooding the network (with ping commands) should be avoided because it “not only interferes with the operational efficiency of the network but also require[s] an extensive use of computational resources to analyze the vast amount of received information.” *See* paragraph [0010]. As applied to the present application, querying certain routers, as disclosed by GORINGE et al., leads in a different direction than flooding through the

system, as recited in claim 1, and thus a line of development flowing from the GORINGE et al. disclosure would unlikely be productive, and thus not obvious, with respect to at least this feature.

Further, GORINGE et al. discloses a system that appears to rely on retrieving information from boundary routers, which are routers that are shared by and include information about multiple regions. *See, e.g.*, paragraph [0023] (“Each area border router within a routing region has a complete copy of the database for all regions on whose border the router is located (or with which the area border router is associated).”). In contrast, claim 1 recites a probe logically connected to a router in each area and configured to receive link state routing protocol data and from the router in each area.

Therefore, GORINGE et al. does not teach or suggest a probe connected to a router in each area and configured to receive link state routing protocol data from the router in each area when the routers flood the link state routing protocol data through the autonomous system.

Accordingly, withdrawal of the rejection of claim 1 based on GORINGE et al. is respectfully requested.

#### Claim 4

With regard to claim 4, Applicants assert that it is allowable at least because it depends from independent claim 1, which Applicants submit has been shown to be allowable, and in view of its additional recitations of novelty.

#### **Claims 5 and 8-18**

The Office Action, dated December 27, 2007, rejects claims 5 and 8-18 under 35 U.S.C. § 103(a) as being unpatentable over GORINGE et al. in view of GREENBERG et al. (U.S. Patent Application Publication No. 2007/0165546). Applicants respectfully traverse the rejection for at least the reasons set forth below.

#### Claim 5

Independent claim 5 recites, in part, “a probe logically connected to and at least partially adjacent to the router in each area and configured to receive link state routing protocol data from the router in each area when the router in each area floods the link state routing protocol data throughout the autonomous system.” No proper combination of GORINGE et al. and GREENBERG et al. teaches or suggests at least these features.

As discussed above with respect to claim 1, GORINGE et al. teaches away from receiving link state routing protocol data when the routers to which a probe is connected floods the link state routing protocol data throughout the autonomous system. Likewise, GORINGE et al. does not disclose a system in which a probe is logically connected to a router in each area and configured to receive link state routing protocol data and from the router in each area.

In addition, the Examiner acknowledged that GORINGE et al. does not disclose probe location, and therefore relied on GREENBERG et al., in combination with GORINGE et al., to teach a probe at least partially adjacent to a router in each area. *See* Office Acton, p. 3. However, GREENBERG et al. discloses that each area (i, j, k) of a packet-switched network 100 requires a separate Link State Advertisements Reflector (LSAR) 161, 162 and 163, rather than a single probe servicing multiple areas, as recited in claim 5.

Therefore, the combination of GORINGE et al. and GREENBERG et al. does not teach or suggest a single probe at least partially adjacent to a router in each area. Moreover, to the extent GORINGE et al. discloses a single probe, there would be no proper motivation to combine multiple probe adjacency teachings of GREENBERG et al. (i.e., probes in each area) to a system having a single probe.

Accordingly, withdrawal of the rejection of claim 5 based on the combination of GORINGE et al. and GREENBERG et al. is respectfully requested.

#### Claim 11

Independent claim 11 recites, in part, “selecting a router in each area from which to collect link state routing protocol data corresponding to the area; and establishing a

logical connection and at least partial adjacency between the selected router in each area and a probe to allow the probe to receive the link state routing protocol data from the selected router in each area.” No proper combination of GORINGE et al. and GREENBERG et al. teaches or suggests at least these features.

As discussed above with respect to claim 5, GORINGE et al. does not disclose a system in which a probe is logically connected to a router in each area to allow the probe to receive link state routing protocol data and from the router in each area. Also, the combination of GORINGE et al. and GREENBERG et al., even if proper, does not teach or suggest a single probe at least partially adjacent to a router in each area.

Accordingly, withdrawal of the rejection of claim 11 based on the combination of GORINGE et al. and GREENBERG et al. is respectfully requested.

#### Claims 8-10, 12-18

With regard to claims 8-10 and 12-18, Applicants assert that they are allowable at least because they depend, directly or indirectly, from independent claims 5 and 11, respectively, which Applicants submit have been shown to be allowable, and in view of their additional recitations of novelty.

For example, claim 12 recites, in part, “configuring a plurality of sub-interfaces on the probe, the plurality of sub-interfaces corresponding to the plurality of areas; and configuring an IP tunnel from an interface on each selected router to the corresponding sub-interface on the probe.” The Examiner acknowledges that GORINGE et al. does not disclose a probe having sub-interfaces, but asserts that GORINGE et al. otherwise notes that other network devices have sub-interfaces, referring to paragraph [0025]. *See* Office Action, p. 4. However, paragraph [0025] of GORINGE et al. only discusses an interface, e.g., of a router, not sub-interfaces on one device.

**Conclusion**

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application in condition for allowance.

If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted on behalf of:

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